What is claimed:

1. A method of preventing or treating in a subject contact dermatitis which comprises administering to the subject an amount of a compound capable of inhibiting the stem cell factor signaling pathway effective to prevent or treat contact dermatitis so as to thereby prevent or treat contact dermatitis in the subject.

2. A method of preventing or treating in a subject hyperpigmentation which comprises administering to the subject an amount of a compound capable of inhibiting the stem cell factor signaling pathway effective to prevent or treat hyperpigmentation so as to thereby prevent or treat hyperpigmentation in the subject.

3. A method of preventing or treating in a subject asthma which comprises administering to the subject an amount of a compound capable of inhibiting the stem cell factor signaling pathway effective to prevent or treat asthma so as to thereby prevent or treat asthma in the subject.

4. A method of preventing or treating in a subject cutaneous inflammation which comprises administering to the subject an amount of a compound capable of inhibiting the stem cell factor signaling pathway effective to prevent or treat cutaneous inflammation so as to thereby prevent or treat cutaneous inflammation in the subject.

5. A method of preventing or treating in a subject anaphylaxis and bronchospasm which comprises administering to the subject an amount of a compound capable of inhibiting the stem cell factor signaling pathway effective to prevent or treat anaphylaxis

and bronchospasm so as to thereby prevent or treat anaphylaxis and bronchospasm in the subject.

6. A method of preventing or treating in a subject mastocytosis which comprises administering to the subject an amount of a compound capable of inhibiting the stem cell factor signaling pathway effective to prevent or treat mastocytosis so as to thereby prevent or treat mastocytosis in the subject.

7. A method of preventing or treating in a subject urticaria which comprises administering to the subject an amount of a compound capable of inhibiting the stem cell factor signaling pathway effective to prevent or treat urticaria so as to thereby prevent or treat urticaria in the subject.

8. A method of preventing or treating in a subject hypersensitivity reactions which comprises administering to the subject an amount of a compound capable of inhibiting the stem cell factor signaling pathway effective to prevent or treat urticaria so as to thereby prevent or treat urticaria in the subject.

9. A method of preventing or treating in a subject airway inflammation which comprises administering to the subject an amount of a compound capable of inhibiting the stem cell factor signaling pathway effective to prevent or treat airway inflammation so as to thereby prevent or treat airway inflammation in the subject.

10. The method of claim 9, wherein the airway inflammation is rhinitis.

11. The method of claim 9, wherein the airway

12. A method of preventing or treating in a subject interstitial cystitis which comprises administering to the subject an amount of a compound capable of inhibiting the stem cell factor signaling pathway effective to prevent or treat interstitial cystitis so as to thereby prevent or treat interstitial cystitis in the subject.

13. A method of preventing or treating in a subject a tumor which expresses activated kit which comprises administering to the subject an amount of a compound capable of inhibiting the stem cell factor signaling pathway effective to prevent or treat a tumor which expresses activated kit so as to thereby prevent or treat a tumor which expresses activated kit in the subject.

14. The method of claim 13, wherein the tumor is a gastrointestinal stromal tumor.

15. The method of claim 13, wherein the tumor is a germ cell tumor.

16. The method of any one of claims 1-13, which comprises inhibiting the kinase enzymatic reaction of kit protein.

17. The method of any one of claims 1-13, which comprises inhibiting chymase, elastase or other SCF cleaving enzymes.

18. The method of any one of claims 1-13, which comprises inhibiting ligand binding with an antibody, peptide, or nonpeptide chemical.

19. The method of any one of claims 1-13, which comprises inhibiting kit dimerization with an antibody, peptide, or nonpeptide chemical.

20. The method of any one of claims 1-13, wherein downstream signaling of the kit activation pathway is inhibited by blocking substrate association with kit kinase domain.

21. The method of any one of claims 1-13, wherein downstream signaling of the kit activation pathway is inhibited by blocking enzymatic function in the downstream signaling pathway.

22. The method of any one of claims 1-13, wherein downstream signaling of the kit activation pathway is inhibited by blocking binding of molecules in the downstream signaling pathway.

23. The method of any one of claims 1-13, wherein the compound is an antibody or portion thereof.

24. The method of claim 23, wherein the antibody is a monoclonal antibody.

25. The method of claim 24, wherein the monoclonal antibody is a human, humanized or a chimeric antibody

26. The method of claim 24, wherein the monoclonal antibody is an anti-kit antibody.

27. The method of claim 26, wherein the anti-kit antibody is ACK2.

28. The method of any one of claims 1-13, wherein the compound comprises a Fab fragment of an anti-kit antibody.

29. The method of any one of claims 1-13, wherein the compound comprises the variable domain of an anti-kit antibody.

30. The method of any one of claims 1-13, wherein the compound comprises one or more CDR portions of an anti-kit antibody.

31. The method of claim 23, wherein the antibody is selected from the group consisting of IgA, IgD, IgE, IgG and IgM.

32. The method of any one of claims 1-13, wherein the compound comprises a peptide, peptidomimetic, a nucleic acid, or an organic compound with a molecular weight less than 500 Daltons.

33. The method of any one of claims 1-13, wherein the compound is sSCF, sKIT ligand or a fragment thereof.

34. The method of any one of claims 1-13, wherein the compound is sKIT or a fragment thereof.

35. The method of any one of claims 1-13, wherein the subject is a mammal.

36. The method of claim 35, wherein the mammal is a human being, dog or cat.

37. The method of any one of claims 1-13, wherein the administration is intralesional, intraperitoneal, intramuscular, subcutaneous, intravenous, liposome mediated delivery, transmucosal, intestinal, topical, nasal, oral, anal, ocular, otic, intravesicular, or parenteral delivery.

38. A method of providing contraception to a subject which comprises administering to the subject an amount of a compound capable of inhibiting the stem cell factor signaling pathway effective to prevent conception so as to thereby provide contraception to the subject.

39. The method of claim 38, wherein the subject is a male subject.

40. The method of claim 38, wherein the subject is a female subject.

41. The method of claim 38, which comprises inhibiting the kinase enzymatic reaction of kit protein.

42. The method of claim 38, which comprises inhibiting chymase, elastase or other SCF cleaving enzymes.

43. A method of desensitizing a subject to an agent which comprises administering to the subject during the afferent phase of an immune response an amount of a compound capable of inhibiting the stem cell factor signaling pathway effective to desensitize the subject to the agent so as to thereby desensitizing the subject to the agent.

44. A method of identifying a composition, a compound, or a procedure which can produce a skin response in a subject, comprising:

a) administering said composition or compound, or applying said procedure to the transgenic mice which express endogenous epidermal stem cell factor; and

b) analyzing the skin of said transgenic mice for response.

45. The method of claim 44, wherein the composition or compound can be administered orally or by injection.

46. The method of claim 44, wherein the composition or compound can be administered topically by contacting the composition or compound with the skin of the transgenic mice.

47. The method of claim 44, wherein the procedure is not previously known.

48. The procedure identified by the method of claim 44.

49. The method of claim 44, wherein the skin response is inflammation, tanning, melanoma, carcinoma or hyperpigmentation.

50. The method of claim 44, wherein the composition may be cosmetics, medications or skin care products.

51. The method of claim 44, wherein the composition or compound is not previously known.

52. The composition or compound identified by the method of claim 44.

53. A mixture for production of a skin response comprising an effective amount of the composition or compound identified by the method of claim 44 and a suitable carrier.

54. A method of identifying a composition, a compound, or a procedure which can reduce skin response in a subject, comprising:

a) administering said composition or compound, or applying said procedure to the transgenic mice which express endogenous epidermal stem cell factor and which had been induced to produce a skin disease; and

b) analyzing the skin of said transgenic mice to determine the reduction of skin response, wherein the reduction of skin response indicates that the composition, compound, or procedure can reduce skin response.

55. The method of claim 54, wherein the composition or compound can be administered orally or by injection.

56. The method of claim 54, wherein the composition or compound can be administered topically by contacting the composition or compound with the skin of the transgenic mice.

57. The method of claim 54, wherein the procedure is not previously known.

58. The procedure identified by the method of claim 54.

59. The method of claim 54, wherein the composition or compound is not previously known.

60. The composition or compound identified by the method of claim 54.

61. A mixture for reducing skin response comprising an effective amount of the composition or compound identified by the method of claim 54 and a suitable carrier.

62. The method of claim 54, wherein the skin response is inflammation, tanning, melanoma, carcinoma or hyperpigmentation.

63. The method of claim 62, wherein the hyperpigmentation is natural occurring hyperpigmentation or post inflammatory hyperpigmentation.

64. The mothod of claim 62, wherein the inflammation is associated with human hyperpigmentation, or human hypopigmentation.

65. A method of identifying a composition, a compound, or a procedure which can reduce radiation damage to the skin of a subject, comprising:

a) administering said composition or compound, or applying said procedure to the skin of the transgenic mice which express endogenous epidermal stem cell factor;

b) subjecting the skin of said transgenic mice and the skin of the control transgenic mice; and

c) analyzing the effects of said composition, compound, or procedure on reducing skin radiation damages.

66. The method of claim 65, wherein the composition or compound can be administered orally or by injection.

67. The method of claim 65, wherein the composition or compound can be administered topically by contacting the composition or compound with the skin of the transgenic mice.

68. The method of claim 65, wherein the procedure is not previously known.

69. The procedure identified by the method of claim 65.

70. The method of claim 63, wherein the composition or compound is not previously known.

71. The composition or compound identified by the method of claim 65.

72. A mixture for reducing skin radiation damages comprising an effective amount of the composition or compound identified by the method of claim 65 and a

suitable carrier.

73. The method of claim 65, wherein the radiation is ultra-violet light.

74. The method of claim 65, wherein the radiation damage is tanning, carcinogenesis, photo-aging, photo-damage or the development of melanoma.

75. The method of claim 54, wherein the subject is a mouse or a human-being.

76. The method of claim 75, wherein the epidermal stem cell factor transgene encodes either a membrane bound epidermal stem cell factor or a membrane/soluble epidermal stem cell factor.

77. The method of claim 76, wherein the epidermal stem cell factor transgene encodes a membrane or soluble epidermal stem cell factor.

78. The method of claim 77, wherein the epidermal stem cell factor transgene is cloned into a construct containing a human cytokeratin 14 promoter.

79. The method of claim 78, wherein the human cytokeratin 14 promoter causes the expression of the stem cell factor transgene in murine skin of the basal layers of the interadnexal epidermis and the follicular epithelium.

80. The method of claim 56, wherein the skin response of the transgenic mice can be induced by applying an irritant or an allergic dermatitis inducing agent to said skin.

81. The method of claim 80, wherein the irritant is croton oil or dinitroflourobenzene.

82. The method of claim 81, wherein the croton oil or dinotrofluorobenzene are applied to the ear or the abdominal skin of the transgenic mice; wherein the abdominal skin is either hairless or shaved.

83. The method of claim 82, wherein the croton oil is used at a concentration of 0.2 percent.

84. The method of claim 81, wherein the dinitrofluorobenzene is used at a concentration of 0.5 percent in a 4:1 mixture of acetone and olive oil.

85. The method of claim 54, wherein the reduction or treatment of hyperpigmentation is determined by electron microscopic analysis.

86. The method of claim 54, wherein the stem cell factor inhibitor is a monoclonal antibody.

87. The method of claim 86, wherein the stem cell factor inhibitor is a monoclonal antibody.

88. The method of claim 87, wherein the monoclonal antibody is ACK2.

89. A pharmaceutical composition for treating human skin diseases, comprising (a) a compound that can treat skin diseases of the transgenic mice which express endogenous epidermal stem cell factor, and (b) a suitable carrier, wherein the compound specifically targets the epidermal stem cell factor or its receptor.

90. The pharmaceutical composition of claim 89, wherein the compound is ACK2.